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THE ASSOCIATION FOR
MEXICAN CAVE STUDIES

NEWSLETTER

Contents

Caves of the Sierra de El Abra
Part III Tamuin and El Pujal, S.L.P.

Membership List

Volume I Number 4

Reprint

April 1965

Caves of the Sierra de El Abra

Part III Tamuin and El Pujal, S.L.P.

by D. McKenzie

The caves near Tamuin and El Pujal, with the following list of rumors, concludes the summary of caves in the Sierra de El Abra of which the AMCS has some knowledge. This should not be considered a survey because, as suggested by the distribution of these caves, coverage of the range has by no means been systematic. The extensive central portion has been neglected because of cavers' preoccupation with the large, little-explored caves that are well known and of easy access. A topographic map of the area, though not detailed, indicates large depression on this more elevated region. Reconnaissance will undoubtedly uncover more "resumideros". Much can be learned of the distribution of the blind fish, Anoptichthys, two species of which are separated by the cavernous, 35 mile long region between Los Sabinos and El Pachon.

The following caves are keyed to the location map. More detailed locations of particular caves, if available will be given to those interested. Local guides are usually well worth the nominal fees they charge.

Ventana Jabali

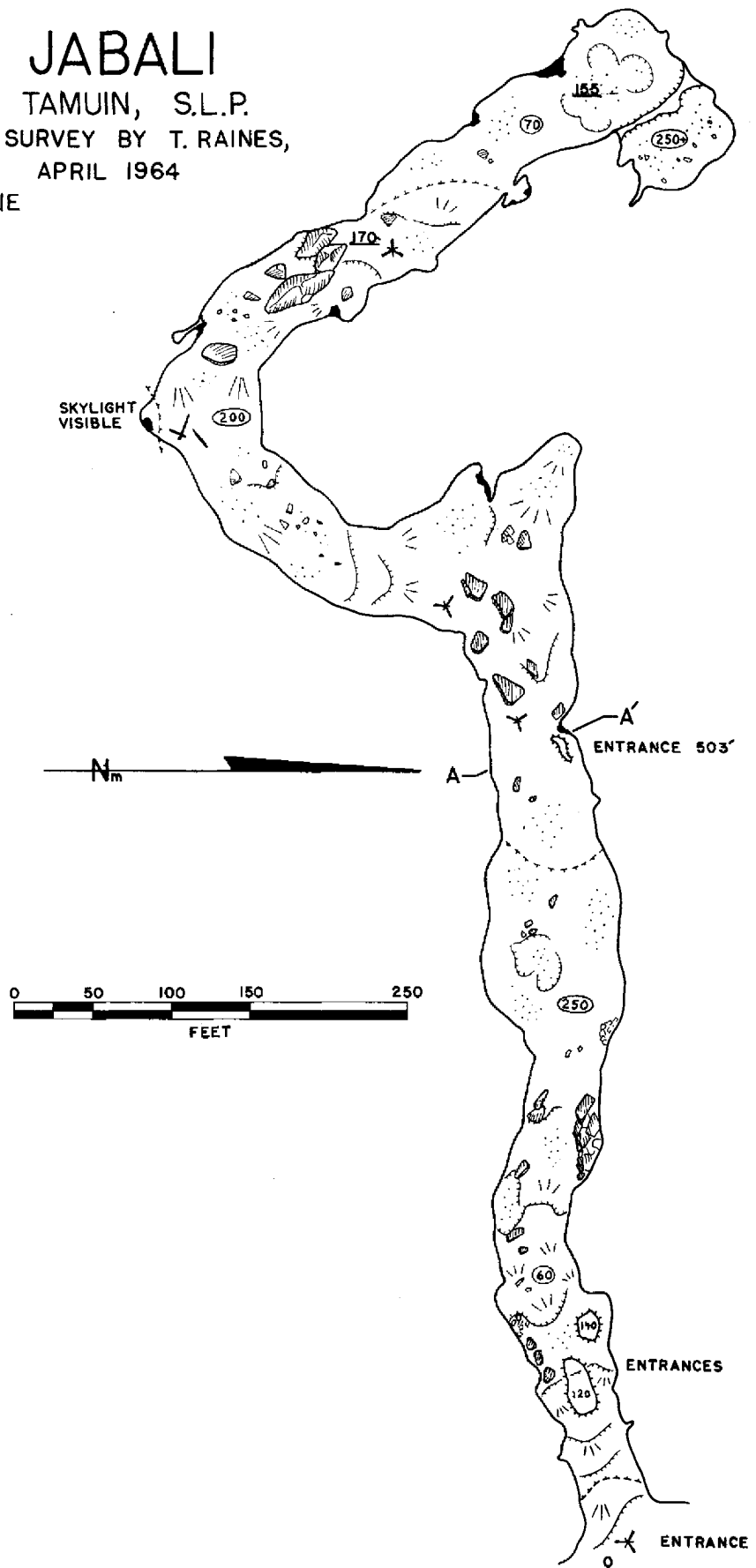
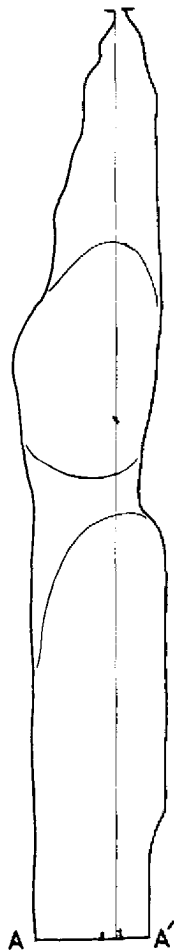
The large oval entrance of Ventana Jabali becomes clearly visible as one drives north of the Valles-Tampico railroad station at Tamuin and alongside an abandoned track paralleling the eastern side of the El Abra Range. Situated one-third of the way below the crest of the range the cave is approached by a narrow road which zig-zags up the steep face. The road once facilitated extensive mining of nitrates from the cave but is now overgrown hardly recognizable.

The cave consists of a single 1200' long solution tunnel with outstanding features are its large dimensions and spectacular skylights. At floor level the passage is from 40' to 90' wide, but the ceiling (when visible) allows for only crude estimation of its height. Broad arches extend to below 150' but the passage is commonly much higher. At one point the ceiling soars to two skylights measured at 503' above the floor and this now stands the longest free drop in any North American cave. When a 200' natural bridge is positioned between an observer and the skylight the broad space above is illuminated with a diffuse blue light. This is certainly one of the greatest spectacles yet provided by Mexican cave.

The floor area throughout has been altered by mining operations and marks of previous levels on the walls indicate a very large amount of fill has been removed. While perhaps conforming to the anticlinal structure of the range, the floor undergoes a rise of 170' in its progression from the entrance. The end of the cave is quite abrupt and here is featured a peculiar limestone partition of solutional origin. A small hole in this 20' high wall gives access to a 50' in diameter floor area where surrounding walls :

VENTANA JABALI

MUNICIPALITY OF TAMUIN, S.L.P.
BRUNTON AND TAPE SURVEY BY T. RAINES,
B. BELL, D. MCKENZIE APRIL 1964
DRAWN BY D. MCKENZIE
AMCS



to well out of sight.

There are at least five skylight entrances to the cave. Besides the two mentioned above, which are 500' from the entrance there is a faint twilight visible another 300' beyond. Though very high this entrance will not allow for an entirely free drop. The two others are about 130' high and situated only a short distance within the cave. For a while during our visit, they were the exit for a cloud layer that swept up the mountainside and entered the 60' high mouth.

The cave was visited in April of 1964 when a survey and biological collections were made by B. Bell, D. McKenzie, and T. Raines. On June 1, Bell and Raines returned and descended to record drop.

The following animals were taken from this cave: terrestrial isopods, a centipede of the Scutigeraomorpha, a whip-scorpion (Mastigoproctus giganteus), spiders (Ctenus sp. and Nesticus sp.), pseudoscorpions, a schizomid (Schizomus sp.), a bug (Pangaeus docilis), ants (Euponera sp.), dermestid beetles (Dermestes carnivorus), and tenebrionid beetles (Liodema sp. nr kirschi and Zophobas atratus). The discovery of Zophobas atratus and Pangaeus docilis in this cave is of great interest since the first is recorded no farther north than Cueva Ricardo Suloaga, Venezuela, and the latter no farther north than Chilibrillo Cave, Panama.

Nacimiento de El Choy (Nacimiento de Taninul)

This impressive river resurgence is developed as an attraction for tenants of Hotel Taninul, a popular resort 12 miles east of Valles. The Rio Choy swiftly emerges from a passage 25' high (above the water) and 30' wide. The water is 10' to 15' deep. A small walk constructed above the water ends at a small balcony slightly within the mouth. From there is visible a series of small rapids lighted by a 170 foot high sotano entrance. The passage beyond appears to be very high, but attendant at the hotel implies that it soon siphons. The cave is not to be confused with Cueva del Nacimiento del Rio Coy, a small cave 20 miles south of Valles, near Rincon Grande.

Cueva de Taninul No. I

The cave is situated directly behind the Hotel Taninul and only a few feet from a swimming pool fed by a nearby sulfur spring. The entrance room has been converted to a dance floor with tables and a bar. A 12 foot high natural bridge accommodates a bandstand. The unaltered portion of the cave begins at 150' from the entrance, where an upper level leads to a constriction covered by a wire gate. By crawling underneath, one can continue west for about 300' through a narrow, irregular passage that becomes too small.

Dr. F. Bonet recorded a late November air temperature of 26.6° C and a humidity of 96%.

A small collection of invertebrates made by D. McKenzie and J. Reddell included the following: terrestrial isopods, spiders (Ctenus sp.), a whip-scorpion (Tarantula sp.), two species of ricinuleid (Cryptocellus n.sp. and Cryptocellus osorioi Bolivar), and crickets of the family Gryllidae. The discovery of additional specimens of the ricinuleid, Cryptocellus osorioi, and of a second species, is of the greatest interest since this is considered the rarest of all arthropods.

Cueva de Taninul No. 2

The small sink entrance of this cave is located about 300' north of Taninul No. 1 and 250' above the foot of the abrupt hillside. Lack of equipment prevented a complete exploration. From an intersection near the entrance, the larger passage trends north parallel to the contour of the hillside, while a narrow fissure extending west requires a hand line for its entrance. The former is generally 15 feet high and wide, continuing approx. 200' to an 8' wide slot in the floor. This must be bridged to enter the continuation of the passage, which appears to remain large.

The floors are of dry silt. Dr. F. Bonet recorded a 23.0° temperature and a 69% humidity.

Cueva de Taninul No. 4

The main entrance can be seen from the Valles-Tampico highway shortly before its emergence from the Valles pass. It is situated about 100 yards west of a railroad tunnel and 75' above the track. The cave is frequently visited and there are steps that extend up the slope. In addition to three cliff entrances, there are at least nine skylights that illuminate the spacious passages. They are well distributed; the 500' long series of rooms can be explored without artificial light. The passage is generally 10' to 15' high and as much as 60' wide. The flat silt floors are free of breakdown, except at the entrances.

A collection by T. Raines included the following animals: epigeal terrestrial isopods, roaches (Periplaneta sp.), crickets (Miogryllus sp. and a possible new genus near Paracoph and a katydid (Dichopetala sp.). With the exception of the possible new genus of cricket all of the fauna is trogloneic or accidental.

Cueva Grande

This is the largest of the caves in the less hilly portion of the range south of the Valles pass. It is located about five kms. N-NE of the small town of El Pujal. The 25' by 15' high entrance is situated in a steep, thickly covered slope and would be difficult to locate without a guide. A boulder slope extends to a 40' by 150' long entrance room with a crawlway continuing at its end. The left wall of the room is a partition separating it from the other of two major passages that compose the cave.

The crawlway is an elliptical solution tube whose major trend is eastward. It often enlarges to stoop-way dimensions or greater and there are occasional domes and small rooms that contain bats. The rock floor is quite damp, but other than a scattering of guano there is little or no fill. During our visit the air was uncomfortably warm due to the lack of circulation. An outline map by Dr. F. Bonet shows the passage as 1000' long, but our exploration was incomplete.

The passage leading north of the cave entrance, by contra is large and well ventilated. Two "claraboyas", or skylights, are featured near mid-length and several large aerial roots extend the full 60' to the floor. Initially the gallery is rather wide and irregular, having a few large flowstone formations, but it eventually becomes fissure-like and ranges near 50' high and 10' or less in width. A 35' drop over flowstone must be handlined to reach the end, a breakdown fill. The passage is approx. 1100' long.

It was reported that a wounded jaguar was killed in a small side passage near the mouth of the cave. We found that very large rat inhabited the "grotto del tigre".

Some measurements taken by F. Bonet, probably in the west section, showed a 91% humidity and a temperature of 25° C.

A small collection made by J. Reddell and D. McKenzie included the following animals from the right-hand tunnel: terrestrial isopods, a schizomid (Schizomus sp.), phalangids, a possible new genus and species of nicoletiid thysanuran, ants (Pheidole sp.), crickets of the family Gryllidae, and beetles.

Sotano de Manuel

Near El Pujal, the lower cultivated areas adjoining the El Abra escarpment are characterized by scattered sinks and depressions. This cave, visited because of its proximity to Cueva Chica, is one of many small caves that doubtless exist in the area. It is situated within the shallow, indistinct course of an arroyo which winds south to eventually enter Cueva Chica — about two kms. distant. Although locally termed a "sotano", the 15' sink entrance is easily climbable, and the two passages which total approx. 1000' never exceed a depth of about 35'.

From the 10' by 25' entrance room, the most obvious lead extends east as a silt-floored crawl and stoopway sometimes reaching 15' to 20' in width. The passage terminates in fill from an apparent surface sink. At the north end of the entrance room, a hole in the breakdown floor enters a small crawlway which, in an irregular fashion, leads to the larger portion of the cave. This sinuous gallery features a few dry flowstone deposits and several attractive domes.

A collection of invertebrates by J. Reddell and D. McKenzie included the following species: terrestrial isopods, spiders (Aphonopelma sp.), mites, a possible new genus and species of thysanuran of the family Nicoletiidae, crickets, histerid beetles, and catopid beetles (Ptomaphagus sp.).

Cueva Sin Nombre

The small pit entrance is located in a cleared pasture between Cueva Chica and Sotano de Manuel. While supposedly rather deep, the sink is covered by a stout bush and is only 2 1/2' by 3' wide — certainly too small to accomodate both an explorer and the 6" in diameter fer-de-lance (*Bothrops strox*) that slid into the cave on our approach. This deadly snake is called "cuatro narices" by the Mexicans.

Cueva Chica

Cueva Chica is certainly the best known of the many small caves in the vicinity of El Pujal. Located 1/2 km. from the highway, it serves as an important water source for a small ranch. A gasoline moter installed 300' within the cave is periodically used to pump water from a deep permanent pool.

The 20' by 4' high entrance accepts the drainage of a shallow but lengthy arroyo. The passage is irregular at first with large rocks covering the floor. Trending south, it soon features a scoured floor and dimensions of 25' by 10' high. At 350' from the entrance is the first deep pool that must be crossed, and here one can observe the blind fish responsible for the cave's popularity. Beyond, the passage undergoes a narrowing and an increase in ceiling height. At the foot of a 75' long series of travertine pools is a second deep pool, about 50' long, 30' wide, and 10'-15' deep. A narrow, 60' high dome inhabited by bats is then encountered. Finally, separate by a low arch, is a 40' in diameter dome above the siphon pool. Total length of the cave is about 750'.

With regard to cave fauna, few Mexican caves have received the attention such as that given to Cueva Chica. The discovery of the blind characin, *Anoptichthys jordani*, in the cave inspired much additional collection. In 1942 Dr. B. F. Osorio Fafall of the Escuela Nacional de Ciencias Biologicas made an intensive study of the aquatic fauna of the cave. His collections and those of others revealed a rich fauna, a list of which follows: protozoa: *Amoeba* sp., *Centropyxis aculeata* Ehrengerg, *Actinoph* sp., *Coleps* cf. *hirtus*, and *Vorticella* cf. *microstoma*; rotifers: *Lepadella patella* (Muller) and *Platyias patulus* (Muller); cyprinostrocods: *Candona* sp.; cytherid ostracods (taken from *Cambar blandingii cuevachicae*): *Entocythere sinuosa* Rioja and *Entocythere claytonhoffi* Rioja; copepods: *Diapomus* (*Microdiap cokeri* Osorio Tafall, *Atheyella* cf. *pilosa*, *Nitocra* sp., *Macrocylops albidus* (Jurine), *Eucyclops* cf. *serrulatus*, *Eucyclops* (*Tropocyclops*) *prasinus* (Fischer), *Paracyclops* cf. *fimbriatus*, *Thermocyclops inversus* Kiefer; crayfish: *Cambarus blandingii cuevachicae* Hobbs; Isopods: *Protrichoniscus potosinus* Mulaik; branchiobdellid worm (taken from *Cambarus blandingii cuevachicae*); *Cambarincola macrodonta* Ellis; a campodeid dipluran: *Campodea Wygodzinsky*; ants: *Pachycondyla harpax montezumia* (F. Smith); collembola: *Mesaphorura foveata* Bonet; a cricket: *Paracophus apterus*; a polydesmid milliped: *Bolivaresmus sabinus* Chamberl. spiders: *Euryopsis spinigera* O.P. Cambridge, *Modisimus texanus* Banks, and *Wendilgarda mexicana* Keyserling; and fish: *Anoptichthys jordani* Hubbs and Innes. Of these animals only the isopods, diplurans, collembola, and fish are troglobites. The protozoa, rotifers, ostracods, copepods, crayfish, branchiobdellid worms, crickets, and millipeds are presumably troglophilic. The remaining species are probably accidentals.

Rumored Caves in the Sierra de El Abra

The AMCS has no first-hand information on the following caves. Several of the more reliably located caves are keyed to the location map. They are listed in order of their north to south distribution in the range.

Cueva de San Rafael de los Castros

The cave is either a resurgence or near one of that name. Bonet gives no description. Source: F. Bonet

Cueva de El Mante

It is referred to as a cave with permanent water. (Cueva de El Mante no. 1 is the Nacimiento del Rio Mante) Source: F. Bor

Cave above the Nacimiento del Rio Mante

It is believed located in the side of the range about one-half km. SW of the resurgence. Though not a shelter cave, it supposedly has a very large entrance room. Source: A guard at the Nacimiento

Cave on the Range above Quintero

There is a local name for this cave, whose access is by a trail beginning at the town's intermittent spring. The trip requires several hours. There is a guide available. Source: Inhabitants of Quintero.

Sotano north of El Pachon

A large sotano is rumored to exist on the western side of the range, possibly approached by a route extending north of the village of El Pachon. Explorers from Mante have supposedly descended the pit and partially traversed a large stream course. More reliable information should be obtained at El Pachon. Source: Local explorers of Cueva del Abra

Sotano east of Aotano de Venadito

This is of more difficult access than Sotano de Venadito, but is said to be "mas importante". It is apparently a large "resumidero". Source: "Antonio", a guide near Venadito

Cueva de La Ceiba

The conspicuous entrance is situated in the eastern face of the range, about 20 km. north of Tamuin and near the Rancho Zimapan. It was referred to as "the largest cave in the El Abra Range". It is also rumored to contain Indian burials. Another obvious cave entrance is just south of there at about

the same elevation. Machetes may prove invaluable for their access. Source: Prof. Luis Zuniga of San Luis Potosi

Cueva Pinta

The cave is well known locally and is reached by a 10 km. trail extending SE of Los Sabinos. The entrance is supposedly large, but Bonet's brief reference implies that it is dry, with light penetrating its major portion.

Source: F. Bonet; Miguel Salinas, a guide at Los Sabinos

Cueva de Las Palmas

Bonet only gives its name and indicates its location. It is evidently above the railroad track north of the Nacimiento de Taninul. Source: F. Bonet

Caves in the Valles pass

West of a "plant of some sort", probably a quarry, two caves in a large cliff near the railroad track were explored. "Both had huge entrances but got smaller after a few hundred feet." A 30 m. sotano and another about half that deep were also visited but apparently not entered.

Source: G. Reynolds and T. Will, Baltimore Grotto News

Cueva de Taninul no. 3

This small cave is located south of the Valles-Tampico highway in the vicinity of Taninul no. 4. A map by F. Bonet indicates the 30' wide entrance faces west, and from there extend two passages varying from 10' to 20' in width. Each of the NE and SE trending passages contain a skylight, and their respective lengths are 90' and 50'. Source: F. Bonet

Sotanos near El Pujal

In a list of sotanos, or caves with vertical entrances, Bonet includes the following ones, El Pujal: Cueva de El Mante, Cueva de Ojo de Agua, and two unnamed sotanos. None of these were explored by Bonet, though one of the latter may be Sotano de Manuel. Source: Dr. F. Bonet

Cueva de El Nilo

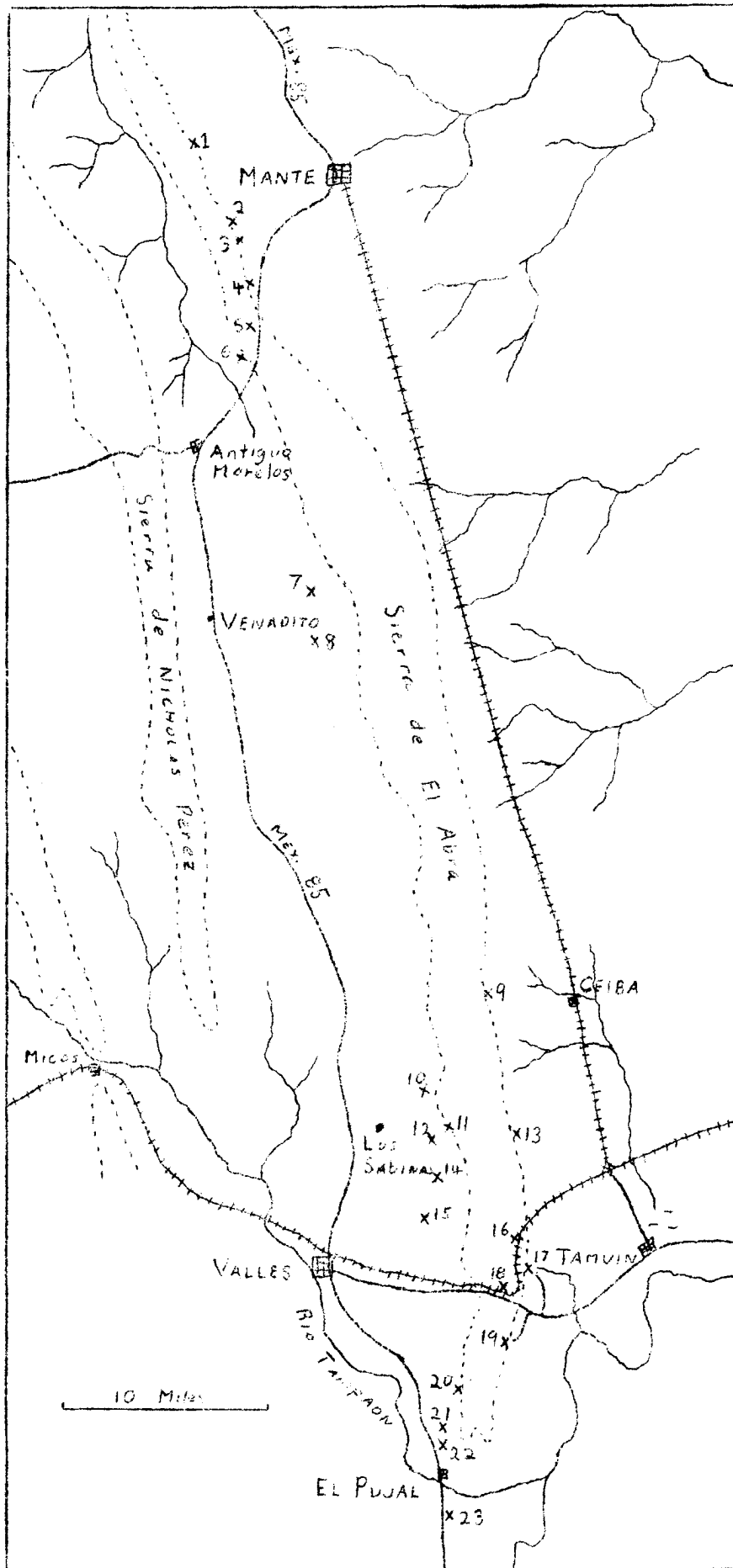
Mohr describes it as "a small cave, partly water-filled, less than 100 yds. east of the highway at Km. Post 451". Vampires inhabit the cave. Source: Charles E. Mohr (NSS News, April, 1950)

Bibliography: Bonet, Frederico. "Datos sobre las cavernas y otros fenomenos erosivos de las calizas de la Sierra de El Abra". In: Congreso Cientifico Mexicano Mem., (V.)3, Ciencias Fisicas y Matematicas, Geologia, p. 238-266, 1953.

We wish to express our appreciation to the following systematists for their identification of material covered by this report: Dr. W.J. Gertsch, American Museum of Natural History, arachnids; Dr. Theodore Hubbell, Museum of Zoology, University of Michigan, crickets and katydids; Dr. Ashley B. Gurney, U.S. National Museum, roaches; Dr. A.C. Cole, University of Tennessee, ants; Dr. Pedro Wygodzinsky, American Museum of Natural History, thysanura; Dr. Richard Fooschner, U.S. National Museum, hemiptera; Dr. John Kingsolver, U.S. National Museum, dermestid beetles; Dr. T.J. Spilman, U.S. National Museum, tenebrionid beetles.

Key to Location Map

1. Cueva de San Raphael de los Castros
2. Cueva de El Mante no. 2
3. Nacimiento de El Mante
4. Grutas de Quintero
5. Cueva de El Abra
6. Cueva de El Pachon
7. Caves near Rancho de La Noria
8. Sotano de El Venadito
9. Cueva de La Ceiba
10. Sotano de Tigre
11. Cueva de Los Sabinos
12. Sotano del Arroyo
13. Ventana Jabali
14. Sotano de la Tinaja
15. Sotano and Sotanita de Montecillos
16. Cueva de Las Palmas
17. Nacimiento de El Choy
18. Cueva de Taninul no. 4
19. Cueva de Taninul no. 1 and no. 2
20. Cueva Grande
21. Sotano de Manuel
22. Cueva Chica
23. Cueva de El Nilo



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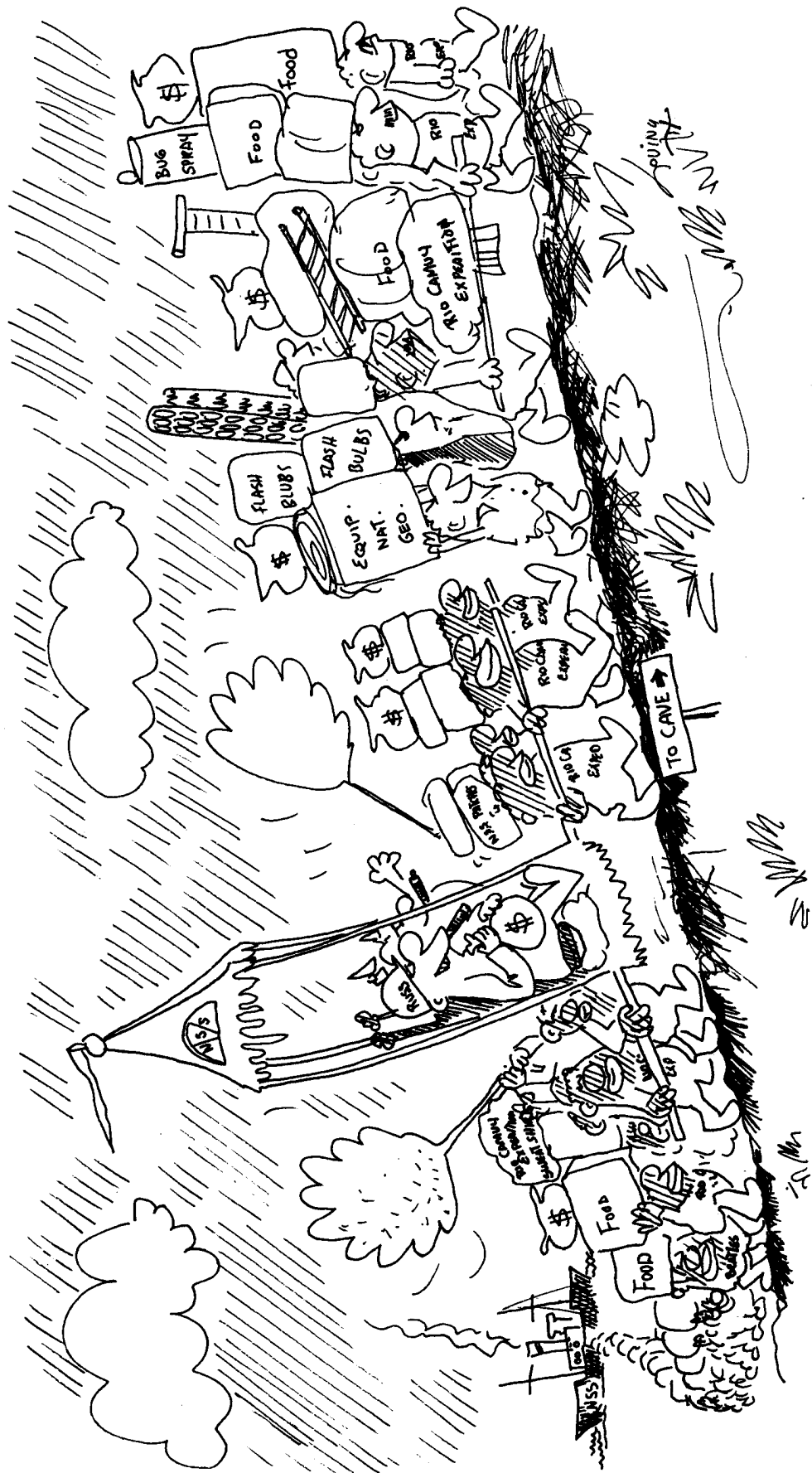
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Editorial

by Bill Russell

The cartoon on the previous page represents the view of many who cave in Mexico that the 1964 Rio Camuy expedition to Puerto Rico did not produce results commensurate with the time and money expended. The NSS then proposed a new expedition to Puerto Rico for three, ten day periods between January 16 and February 14, 1965. No mention was made of the method used to select the Rio Camuy area again for 1965. It is possible that the National Geographic Society, which is providing most of the money and equipment, is interested only in this area and would not support trips to other areas. But if this is not the case and the NGS is only interested in obtaining the best article for its money, and is relying on the advice of the officers of the NSS as to the best area, then the method of selecting the expedition site should be changed. As soon as the NSS is aware that the NGS is interested in a cave article, proposals as to the site of the expedition should be invited from all NSS members. Then from these proposals the NSS and the NGS can agree on areas that would best suit their needs.

Many areas in Mexico suggest themselves. A study of the Joya de Salas area alone would make an excellent article. There is also the mountainous region north of Xilitla and the little known Huatla area SE of Mexico City. Nearer civilization are the two underground rivers, the San Jeronimo and the Chontacuatlan, which emerge below the great Cacahuamilpa Cavern to form the Rio Amacuzac. Charles Mohr has felt that "the penetration of this subterranean watercourse would be one of the supreme thrills of speleology". It is possible that the Rio Camuy has more to offer, but it is hoped that in the future the leaders of the NSS will at least be open to suggestion.

The AMCS Newsletter is published monthly by the Association for Mexican Cave Studies, P.O. Box 7672 UT Station, Austin, Texas 78712. Membership in the AMCS is \$5.00 for the calendar year, with memberships starting at the first of each year. Persons joining after the first of the year will receive all back publications of that year.

Members are urged to submit articles for publication. Maps submitted for publication should be of a type suitable for copy onto a standard or legal size Mimeograph master. Longer articles with more detailed maps are invited for publication as a bulletin. Trip reports are requested from all trips.

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